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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,289	01/26/2004	Tetsuya Shirogane	16869N-103900US	2560

20350 7590 04/18/2007  
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EXAMINER
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MORAN, RANDAL D

ART UNIT	PAPER NUMBER
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2135

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/18/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/765,289

Applicant(s)

SHIROGANE, TETSUYA

Examiner

Randal D. Moran

Art Unit

2135

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 20-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/26/2004 and 3/21/2005</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. The Information Disclosure Statements filed on 1/26/2004 and 3/21/2005 have been considered by the examiner.
2. The preliminary amendments filed on 3/1/2005 and 7/5/2005 have been considered by the examiner.
3. Claims 17-19 have been cancelled by the applicant in preliminary amendment dated 7/5/2005. Claims 1-16, 20-22 are pending in this application.
4. Below, Examiner has pointed out particular references contained in the prior art(s) of record in the body of this action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claims, other passages and figures may apply as well. Applicant should consider the entire prior art as applicable as to the limitations of the claims. It is respectfully requested from the applicant, in preparing the response, to consider fully each reference in its entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior arts or disclosed by the examiner.

### ***Claim Objections***

5. **Claims 1, 6, and 7** are objected to for lack of antecedent basis.
- **Claim 1**- line 20, recites the limitation "the determination result". There is insufficient antecedent basis for this limitation in the claim.
  - **Claims 6 and 7**- lines 1-2, recite the limitation "the determination result". There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:
- The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
7. **Claims 1-9, 16, and 22** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
8. Considering **Claims 1**- lines 16-18, **and 22**- lines 16-20, it is unclear in the limitation "a second determination means...by examination of said access management table" if the "*examination*" occurs between the "*first information transmitted by said host computer in response to the request issued*" and the "*access management table*". Or in the alternative, if the "*examination of said*

*access management table*” causes the “*request*” to be “*issued by said request means*”. For the purposes of examination, the examiner will use the alternative.

9. Considering **Claim 9**- lines 1-4, it is unclear in the limitation “said access management table...with the MAC address” how the “*access management table is used for storing an IP address*” when “first information...is an MAC address” (claim 3- line 2) which is stored in “an access management table” (claim 1- lines 6-7).
10. Considering **Claim 16**- lines 9-11, the limitation “with regard to processing of said command in a third determination process after said second determination process” is unclear.

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. **Claims 1-16 and 20-22** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Grosner et al. (US 2004/0044744)**, hereafter "Grosner" in view of **Davis et al. (US 6,088,450)**, hereafter "Davis".
13. Grosner was presented by applicant in an IDS filed on 3/21/2005.
14. Considering **Claim 1, 10, and 22**, Grosner discloses a storage apparatus for processing a command transmitted by a host computer connected to said storage apparatus by a network, said storage apparatus comprising: a storage unit for storing data to be processed in accordance with said command; a memory for holding an access management table for storing first information on identification of said host computer; and a second determination means for carrying out a determination process on the first information transmitted by said host computer in response to the request issued by said request means by examination of said access management table; wherein a decision as to whether or not to approve the login request is made in accordance with the determination result output by said second determination means (abstract, [0017]-[0024], [0074]-[0081], [0213]-[0216], as provided by the applicant in petition to make special on 7/5/2005).

Grosner does not disclose a first determination means for determining whether or not a frame of a login request transmitted by said host computer includes second

information on identification of said host computer; a request means for transmitting a request to a source address specified in the frame of the login request in order to request said host computer to transmit the first information on identification of said host computer in a case where the determination result output by said first determination means indicates that the frame of the login request does not include the desired second information.

Davis does disclose a first determination means for determining whether or not a frame of a login request transmitted by said host computer includes second information on identification of said host computer (Fig. 5- item 400-410, column 6- lines 13-25, the security device would request a password (first information) and upon receiving the password, no second information is available); a request means for transmitting a request to a source address specified in the frame of the login request (Fig. 5- item 415, column 6- lines 26-29) in order to request said host computer to transmit the first information on identification of said host computer in a case where the determination result output by said first determination means indicates that the frame of the login request does not include the desired second information (Fig. 5- item 415-435, column 6- lines 29-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Grosner by a challenge-response

protocol for authentication as taught by Davis in order to increase the security of the authentication process. A challenge response protocol mitigates the likelihood of unauthorized use of an electronic device through periodic challenge/response messages (Davis- column 1- lines 24-29). The challenge-response type of authentication is suggested in Grosner, though not taught in detail ([0264], [0459]).

15. Considering **Claim 20**, Grosner discloses a command-processing method for carrying out a communication between a first apparatus having an iSCSI initiator and a second apparatus having an iSCSI target through an IP network, said command-processing method comprising: receiving a frame of a login request made by said first apparatus in said second apparatus; checking whether or not an access made by said first apparatus is to be permitted by examination of said second predetermined information transmitted by said first apparatus to said second apparatus; and processing a command transmitted by said first apparatus to said second apparatus in said iSCSI target of said second apparatus in a case where a result of checking indicates that an access made by said first apparatus as an access to said second (abstract, [0017]-[0024], [0074]-[0081], [0213]-[0216], as provided by the applicant in petition to make special on 7/5/2005).

Grosner does not disclose checking whether or not said frame includes first predetermined information for identifying said first apparatus; issuing a request from said second apparatus for acquisition of second predetermined information for identifying said first apparatus from said first apparatus in a case where said frame does not include said first predetermined information.

Davis does disclose checking whether or not said frame includes first predetermined information for identifying said first apparatus (Fig. 5- item 400-410, column 6- lines 13-25, the security device would request a password (second information) and upon receiving the password, no second information is available); issuing a request from said second apparatus for acquisition of second predetermined information for identifying said first apparatus from said first apparatus in a case where said frame does not include said first predetermined information (Fig. 5- item 415-435, column 6- lines 26-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Grosner by a challenge-response protocol for authentication into a storage unit as taught by Davis in order to increase the security of the authentication process. A challenge response protocol mitigates the likelihood of unauthorized use of an electronic device through periodic challenge/response messages (Davis- column 1- lines 24-29).

The challenge-response type of authentication is suggested in Grosner, though not taught in detail (Grosner- [0264], [0459]).

16. Considering **Claim 2**, the combination of Grosner and Davis discloses an access is made to said storage unit by adoption of an iSCSI protocol (Grosner- Fig. 8- item 804, [0818] lines 7-10).
17. Considering **Claim 3 and 11**, the combination of Grosner and Davis discloses the first information stored in said access management table is an MAC address of an interface with an IP network through which said host computer is connected to said storage apparatus and an IP address is used as the second information ([0459]).
18. Considering **Claims 4, 14, and 21**, the combination of Grosner and Davis discloses storage apparatus further having an SNMP manager for monitoring an apparatus connected to said IP network, and wherein said SNMP manager transmits a frame, which is used for requesting said host computer to transmit the first information, as an SNMP request for requesting said host computer to transmit an MIB of an interface related to said host computer (Fig. 33, [0024], [0092] lines 19-20, [0575]).

19. Considering **Claim 5**, the combination of Grosner and Davis discloses a console used for changing a content of said access management table ([0132], [0428]-[0429], changing the configuration of the IP subnet masks with change the contents that are added to the table, [0541], Fig. 32, [0582], [0583])).
20. Considering **Claims 6 and 13**, the combination of Grosner and Davis discloses if the determination result produced by said second determination means indicates that the first information for identifying said host computer is not stored in said access management table, a content of said login request is stored in said memory as log data ([0512], [0518]-[0536]).
21. Considering **Claim 7**, the combination of Grosner and Davis discloses if the determination result produced by said second determination means indicates that the first information for identifying said host computer has been stored in said access management table ([0459]- lines 1-6), a source IP address of the login request is stored in said access management table, being associated with said information for identifying said host computer ([0459] lines 6-12).
22. Considering **Claim 8**, the combination of Grosner and Davis discloses access management table is used for cataloging a MAC address and an identification code for identifying a logical unit (LU) accessible to a host computer having an IP-network interface identified by the MAC address ([0188], [0189]); and prior to

processing of a command received from said host computer, an access requested by the command is examined to determine whether or not the access is an access to an accessible logical unit and the command is processed only if the access is found out to be an access to an accessible logical unit ([0208],[0209]).

23. Considering **Claim 9**, the combination of Grosner and Davis discloses access management table is used for storing an IP address assigned to a host computer having an IP-network interface identified by a MAC address as an address associated with the MAC address ([0459]).
24. Considering **Claim 12**, the combination of Grosner and Davis discloses preparing a table, which is used for cataloging first information for identifying an external apparatus allowed to make accesses to said storage apparatus ([0457]); wherein, in said second determination process, first information acquired from an external apparatus is checked by referencing said table in determination of whether or not an access permit should be given to said external apparatus ([0457], [0459]).
25. Considering **Claim 15**, the combination of Grosner and Davis discloses a MAC address is obtained from said external apparatus by adoption of a protocol based on an iSCSI text mode negotiation ([0090]- lines 6-13, [0459]).

26. Considering **Claim 16**, the combination of Grosner and Davis discloses defining a plurality of logical units (LUs) in said storage apparatus ([0455]); preparing an access management table for storing a MAC address and an identification code for identifying one of said logical units, which is accessible to an external apparatus having an IP-network interface identified by said MAC address ([0459]); and determining whether or not an access requested by a command transmitted by an external apparatus is an access to a specific one of said logical units, which has an identification code cataloged in advance in said access management table ([0457], [0458]), with regard to processing of said command in a third determination process after said second determination process; wherein said command is processed if a result of said third determination process indicates that said access requested by said command is an access to said specific accessible logical unit ([0457], [0458] accessing the webpage would be executing the command).

### ***Conclusion***

27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US 2003/0009444 – Secured Shared Storage Architecture
- US 6034618 – Device Authentication

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randal D. Moran whose telephone number is 571-270-1255. The examiner can normally be reached on M-F: 7:00 - 4:00.

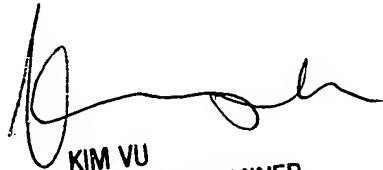
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Randal D. Moran

*RDm*

*4/5/07*

  
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SUPERVISORY PATENT EXAMINER  
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